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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/709,952	06/08/2004	James William Bishop Jr	ARMP0002	3951
7590 Chief Technology Officer, ArmorPost Suite 200 8430 Terrapin Trail Colorado Springs, CO 80919			EXAMINER	
			HENEGHAN, MATTHEW E	
			ART UNIT	PAPER NUMBER
			2134	
SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE		
3 MONTHS	02/02/2007	PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/709,952	BISHOP ET AL.
<b>Examiner</b>	Matthew Heneghan	<b>Art Unit</b> 2134

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on 08 June 2004.

2a)  This action is FINAL.                    2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

4)  Claim(s) 1-28 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5)  Claim(s) \_\_\_\_\_ is/are allowed.

6)  Claim(s) 1-28 is/are rejected.

7)  Claim(s) \_\_\_\_\_ is/are objected to.

8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on 08 June 2004 is/are: a)  accepted or b)  objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

1)  Notice of References Cited (PTO-892)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3)  Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 12/21/04.

4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_ .  
5)  Notice of Informal Patent Application  
6)  Other: \_\_\_\_ .

**DETAILED ACTION**

1. Claims 1-28 have been examined.

***Priority***

2. The instant application has been filed as a continuation-in-part of copending U.S. Patent Application No. 10/701,355, filed 4 November 2003, which claims priority to Provisional U.S. Patent Applications Nos. 60/423,705; 60/436,227; and 60/466,910, filed on 4 November 2002, 23 December 2002, and 1 May 2003, respectively. The instant application also claims priority to Provisional U.S. Patent Application No. 60/477,736, filed 11 June 2003.

***Information Disclosure Statement***

3. The following Information Disclosure Statement in the instant application has been fully considered:

IDS filed 21 December 2004.

***Specification***

4. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required:

The specification does not disclose the term "external agent" as used in claim 10. For purposes of the prior art search, it is being presumed that an external agent resides on a computer other than that of the trusted courier.

The specification does not disclose the term "communication channel" as used in claim 20 et al. For purposes of the prior art search, it is being presumed that an external agent resides on a computer other than that of the trusted courier. It is being presumed that the foreground and background elements constitute different communications channels.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-6, 8-14 and 18-23 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,873,977 to Aggarwal.

As per claims 1, 2, 10, and 19, Aggarwal discloses a transaction system over the Internet (see abstract), which is a packet network, wherein a buyer, at what constitutes a private message agent, selects a seller, which is likewise a private messaging agent, relaying the encrypted transaction over several hops, with each hop decrypting and verifying a portion of the message, which are trusted couriers (see column 4, line 43 to column 5, line 5; the mechanisms in column 6, lines 1-19 ensure that they have trusted relationships with both agents and one another). The access restrictions (trusted courier information, keys, etc.) are communicated to all parties using a program Aplic<sub>1</sub>, which constitutes the background element; the order itself (i.e. the message) is separately transmitted using the program Aplic<sub>2</sub>, which constitutes the foreground element (see column 6, line 32 to column 7, line 19).

As per claims 3 and 11, the foreground element further uses the CS (Coding Station) to maintain account management information for future use such as the names of relays (trusted couriers) (see column 7, lines 15-27).

Regarding claims 4, 5, 12, and 13, since Aggarwal discloses the use of encrypted transmissions between the various nodes, the foreground and background elements must comprise information security components, as encryption and decryption are done locally (see column 5, lines 63-65). Non-repudiable certificates, which are authentication credentials, are used in all transactions along the chain (see column 6, lines 1-4).

As per claim 6, Aggarwal discloses that the trusted couriers may associate with multiple coding stations (different companies). Since different companies do not share

domains, there is no constraint on address domains (see column 5, lines 42-49).

Regarding claims 8 and 9, the Coding Station may select one bank (trusted courier) to be the customer's gateway to the remainder of the relays, thus limiting a customer to beginning any transaction to that bank (see column 5, lines 36-38).

As per claims 14 and 18, Aggarwal discloses that in the event that the user does not already have an account, an on-line registration form (an Invitation to Register) is sent to the user, who completes the form. This is then processed with Aplic<sub>2</sub> being created using Aplic<sub>1</sub> (see column 6, line 62 to column 7, line 1).

As per claim 20, the content encryption keys, S, are propagated to the trusted couriers and eventually the recipient agent. They are used to relay the private messages from one trusted courier to another (see column 4, line 48 to column 5, line 3).

As per claim 21, the second agent may then send a transmission (such as a delivery of electronic content) back to the first agent along the same path of trusted couriers, which have determined one another to be trusted (see column 5, lines 10-15).

As per claim 22, trusted relationships are further ensured by the use of cryptographic signatures in messages that only can be verified by those having the appropriate keys (those who are trusted) (see column 5, lines 20-22 and column 6, lines 13-14).

As per claim 23, since each message is multiply encrypted with the public keys of all of the nodes along a path, including that of the eventual recipient, complete

encryption by any courier is impossible, since no courier has all of the needed private keys for decryption (see column 4, lines 48-58).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 15-17 and 24-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,873,977 to Aggarwal.

Regarding claim 15, messages such as home (web) pages are sent to any potential users (see column 6, lines 20-22; registration is not necessary until later, see column 6, lines 63-66). An explanation to the user (instructions) is available (see column 6, lines 22-27). Certificates are proffered at all transaction points (see column 6, lines 1-4). Aggarwal does not state that the home page is sent unencrypted.

Official notice is given that it is well-known in the art to send publicly available information in an unencrypted form, as, since security is not necessary, encryption would cost unnecessary computation overhead.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to send the home page in an unencrypted form, as is well-

known in the art, since security is not necessary, encryption would cost unnecessary computation overhead.

Regarding claims 16 and 17, Aggarwal discloses a form for the user to fill out in the registration process (see column 6, lines 64-66), but does not detail the information that should be retrieved in the form. Since there is a check if the user is previously registered (see column 6, lines 63-64), this registration must result in the construction of permanent customer account information. An application, Aplic<sub>1</sub>, is downloaded to the user for order processing (see column 6, lines 32-34), which later is executed to create Aplic<sub>2</sub> and select trusted couriers, set up and activate accounts for the user with the trusted couriers, and create (store) and distribute keys (see column 6, line 50 to column 7, line 19). All transmissions to and from the trusted couriers are verified with signatures and certificates, as described above, thus indicating that an agent has been installed correctly.

Aggarwal does not disclose the setting up of account passwords.

Official notice is given that it is well-known in the art to set up user accounts with trusted entities using passwords, in order to prevent the use of an account by an intruder.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to implement the user account with a password, in order to prevent the use of an account by an intruder.

Aggarwal also does not disclose the attaching of user contact information or billing information to the account.

However these differences are only found in the nonfunctional descriptive material and are not functionally involved in the steps recited. The requesting step would be performed the same regardless of the data. Thus, this descriptive material will not distinguish the claimed invention from the prior art in terms of patentability, see *In re Gulack*, 703 F.2d 1381, 1385, 217 USPQ 401, 404 (Fed. Cir. 1983); *In re Lowry*, 32 F.3d 1579, 32 USPQ2d 1031 (Fed. Cir. 1994).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to attach user contact information or billing information to the account because such data does not functionally relate to the steps in the method claimed and because the subjective interpretation of the data does not patentably distinguish the claimed invention.

As per claim 24, the first agent has knowledge of a pool of business partners (trusted couriers); the private message sent to the first courier comprises a message ID (the order number); other information, such as the identity of the seller, is not part of the message payload and therefore must be in a header (see column 4, lines 45-58). Each courier decrypts and verifies its reception of the message using its own private key, retrieving information about the next hop (which must come from the header) (see column 4, lines 59-66 and column 5, lines 20-22).

Aggarwal discloses that communication between each of the business partners (couriers) should be verified with known algorithms (see column 5, lines 1-3), but does not specifically state how this is done; however, Aggarwal also discloses the use of

secure public-key signatures (hashes) for message verification, noting that this prevents improper delivery of data (see column 1, lines 57-61 and column 6, lines 13-14).

Therefore it would be obvious to one of ordinary skill in the art at the time was made to implement the verification of transmission of messages between couriers disclosed by Aggarwal using public-key signatures, using the recipient courier's well-known public signing key (for later verification by the recipient courier using its corresponding private key); as this securely prevents improper delivery of data.

At the final hop, the last courier in the chain identifies the recipient (second agent) address and, similarly signs the message using the second agent's public key; this is decrypted by the second agent as described above.

As per claims 25 and 27, each courier must have programs (background and foreground agents) to forward the appropriate background- and foreground-oriented messages.

Regarding claims 26 and 28, the breakdown of background vs. foreground traffic is as per the agents, above.

7. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,873,977 to Aggarwal as applied to claim 1 above, and further in view of U.S. Patent No. 6,529,885 to Johnson.

Aggarwal does not disclose that one of the trusted couriers may limit itself to serving only users in its domain.

Johnson discloses an electronic commerce system in which a user needs to access the system by directly logging into the user's home bank (the first courier), and accessing the system from that site. This allows for the home bank to present itself as a value-added portal (see column 10, lines 38-64).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Aggarwal by having the user conduct transactions by logging on to the home bank's site, which is in the same domain of the first courier (the home bank), as this allows the home bank to present itself as a value-added portal.

### ***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
  
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew E. Heneghan, whose telephone number is (571) 272-3834. The examiner can normally be reached on Monday-Friday from 8:30 AM - 4:30 PM Eastern Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kambiz Zand, can be reached at (571) 272-3811.

**Any response to this action should be mailed to:**  
Commissioner of Patents and Trademarks

P.O. Box 1450  
Alexandria, VA 22313-1450

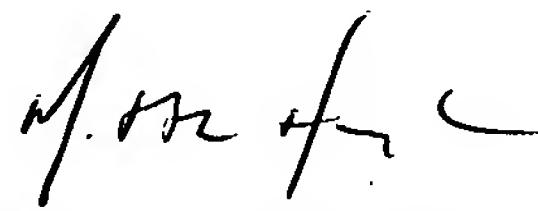
**Or faxed to:**  
(571) 273-3800

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MEH

January 31, 2007

  
Matthew Heneghan, USPTO Art Unit 2134